SEQUENCE LISTING

<110> The Australian National University

<120> METHOD OF PRODUCING PLANTS HAVING ENHANCED TRANSPIRATION EFFICIENCY AND PLANTS PRODUCED THEREFROM

<130> 94948/MRO

<150> AU PS3339
<151> 2002-07-02

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<170> PatentIn version 3.1

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Thr Ser Pro Ser Ser Asp Tyr Cys Val Trp Arg Gly Val Ser Cys Glu
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Asn Val Thr Phe Asn Val Val Ala Leu Asn Leu Ser Asp Leu Asn Leu
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Asp Gly Glu Ile Ser Pro Ala Ile Gly Asp Leu Lys Ser Leu Leu Ser
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Ile Asp Leu Arg Gly Asn Arg Leu Ser Gly Gln Ile Pro Asp Glu Ile
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Ser Gly Glu Ile Pro Arg Leu Ile Tyr Trp Asn Glu Val Leu Gln Tyr
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Gly Phe Leu Gln Val Ala Thr Leu Ser Leu Gln Gly Asn Gln Leu Ser
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Asp Leu Ser Gly Asn Leu Leu Ser Gly Ser Ile Pro Pro Ile Leu Gly
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Asn Leu Thr Phe Thr Glu Lys Leu Tyr Leu His Ser Asn Lys Leu Thr
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Gly Pro Ile Pro Asp His Leu Ser Ser Cys Thr Asn Leu Asn Ser Leu
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Ser Lys Ser His Thr Ser Thr Tyr Val Met Gly Thr Ile Gly Tyr Ile
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Asp Pro Glu Tyr Ala Arg Thr Ser Arg Leu Thr Glu Lys Ser Asp Val
820 825 830

Tyr Ser Tyr Gly Ile Val Leu Leu Glu Leu Leu Thr Arg Arg Lys Ala
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Val Asp Asp Glu Ser Asn Leu His His Leu Ile Met Ser Lys Thr Gly
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Asn Asn Glu Val Met Glu Met Ala Asp Pro Asp Ile Thr Ser Thr Cys
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Lys Asp Leu Gly Val Val Lys Lys Val Phe Gln Leu Ala Leu Leu Cys
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Thr Lys Arg Gln Pro Asn Asp Arg Pro Thr Met His Gln Val Thr Arg
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Val Leu Gly Ser Phe Met Leu Ser Glu Gln Pro Pro Ala Ala Thr Asp
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Thr Ser Ala Thr Leu Ala Gly Ser Cys Tyr Val Asp Glu Tyr Ala Asn
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Leu Lys Thr Pro His Ser Val Asn Cys Ser Ser Met Ser Ala Ser Asp
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Glu Leu Lys Asn Leu Gln Phe Val Asp Leu Lys Gly Asn Lys Leu Thr
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Gly Gln Ile Pro Asp Glu Ile Gly Asp Cys Ile Ser Leu Lys Tyr Leu
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Lys Leu Lys Gln Leu Glu Glu Leu Ile Leu Lys Asn Asn Gln Leu Thr
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Gly Pro Ile Pro Ser Thr Leu Ser Gln Ile Pro Asn Leu Lys Thr Leu
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Asp Val Arg Gly Asn Asn Leu Thr Gly Thr Ile Pro Glu Ser Ile Gly
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Asn Cys Thr Ser Phe Glu Ile Leu Asp Ile Ser Tyr Asn Gln Ile Ser
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260 265 270

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Pro Ile Pro Ser Ile Leu Gly Asn Leu Ser Tyr Thr Gly Lys Leu Tyr
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340 345 350

Thr Ile Pro Ala Glu Leu Gly Lys Leu Glu Glu Leu Phe Glu Leu Asn
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Cys Thr Ala Leu Asn Lys Phe Asn Val Tyr Gly Asn Lys Leu Asn Gly
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Cys Glu Leu Lys Ser Gly Lys Ala Ile Ala Val Lys Arg Leu Tyr Ser
690 695 700

Gln Tyr Asn His Ser Leu Arg Glu Phe Glu Thr Glu Leu Glu Thr Ile
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Val Leu Gly Thr Ile Gly Tyr Ile Asp Pro Glu Tyr Ala Arg Thr Ser
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Pro Thr Met His Glu Val Ala Arg Val Leu Leu Ser Leu Leu Pro Ala
930 935 940

Ser Ala Met Thr Thr Pro Lys Thr Val Asp Tyr Ser Arg Leu Leu Ala

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Ser Thr Thr Thr Ala Ala Asp Met Arg Gly His Asp Val Thr Asp Ile
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35 40 45

Cys Ser Trp Arg Gly Val Leu Cys Asp Asn Val Thr Phe Ala Val Ala
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Ala Leu Asn Leu Ser Gly Leu Asn Leu Glu Gly Glu Ile Ser Pro Ala
65 70 75 80

Val Gly Ser Leu Lys Ser Leu Val Ser Ile Asp Leu Lys Ser Asn Gly
85 90 95

Leu Ser Gly Gln Ile Pro Asp Glu Ile Gly Asp Cys Ser Ser Leu Arg
100 105 110

Thr Leu Asp Phe Ser Phe Asn Asn Leu Asp Gly Asp Ile Pro Phe Ser
115 120 125

Ile Ser Lys Leu Lys His Leu Glu Asn Leu Ile Leu Lys Asn Asn Gln
130 135 140

Leu Ile Gly Ala Ile Pro Ser Thr Leu Ser Gln Leu Pro Asn Leu Lys
145 150 155 160

Ile Leu Asp Leu Ala Gln Asn Lys Leu Thr Gly Glu Ile Pro Arg Leu
165 170 175

Ile Tyr Trp Asn Glu Val Leu Gln Tyr Leu Asp Val Lys Asn Asn Ser
180 185 190

Leu Thr Gly Val Ile Pro Asp Thr Ile Gly Asn Cys Thr Ser Phe Gln

195 200 205

Val Leu Asp Leu Ser Tyr Asn Arg Phe Thr Gly Pro Ile Pro Phe Asn
210 215 220

Ile Gly Phe Leu Gln Val Ala Thr Leu Ser Leu Gln Gly Asn Lys Phe
225 230 235 240

Thr Gly Pro Ile Pro Ser Val Ile Gly Leu Met Gln Ala Leu Ala Val
245 250 255

Leu Asp Leu Ser Tyr Asn Gln Leu Ser Gly Pro Ile Pro Ser Ile Leu
260 265 270

Gly Asn Leu Thr Tyr Thr Glu Lys Leu Tyr Ile Gln Gly Asn Lys Leu
275 280 285

Thr Gly Ser Ile Pro Pro Glu Leu Gly Asn Met Ser Thr Leu His Tyr
290 295 300

Leu Glu Leu Asn Asp Asn Gln Leu Thr Gly Ser Ile Pro Pro Glu Leu
305 310 315 320

Gly Arg Leu Thr Gly Leu Phe Asp Leu Asn Leu Ala Asn Asn His Leu
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Glu Gly Pro Ile Pro Asp Asn Leu Ser Ser Cys Val Asn Leu Asn Ser
340 345 350

Phe Asn Ala Tyr Gly Asn Lys Leu Asn Gly Thr Ile Pro Arg Ser Leu
355 360 365

Arg Lys Leu Glu Ser Met Thr Tyr Leu Asn Leu Ser Ser Asn Phe Ile
370 375 380

Ser Gly Ser Ile Pro Ile Glu Leu Ser Arg Ile Asn Asn Leu Asp Thr
385 390 395 400

Leu Asp Leu Ser Cys Asn Met Met Thr Gly Pro Ile Pro Ser Ser Ile
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Gly Ser Leu Glu His Leu Leu Arg Leu Asn Leu Ser Lys Asn Gly Leu
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Val Gly Phe Ile Pro Ala Glu Phe Gly Asn Leu Arg Ser Val Met Glu
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Ile Asp Leu Ser Tyr Asn His Leu Gly Gly Leu Ile Pro Gln Glu Leu
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Glu Met Leu Gln Asn Leu Met Leu Leu Asn Val Ser Tyr Asn Asn Leu
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Cys Arg Ser Thr Gly His His Glu Lys Pro Pro Ile Ser Lys Ala Ala
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Val Ser Lys Pro Val Arg Asn Ala Pro Pro Lys Leu Val Ile Leu His
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595 600 605

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Tyr Ala His Tyr Pro Gln Ser Leu Lys Glu Phe Glu Thr Glu Leu Glu
625 630 635 640

Thr Val Gly Ser Ile Lys His Arg Asn Leu Val Ser Leu Gln Gly Tyr
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Ser Leu Ser Pro Val Gly Asn Leu Leu Phe Tyr Asp Tyr Met Glu Cys
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Gly Ser Leu Trp Asp Val Leu His Glu Gly Ser Ser Lys Lys Lys Lys
675 680 685

Leu Asp Trp Glu Thr Arg Leu Arg Ile Ala Leu Gly Ala Ala Gln Gly
690 695 700

Leu Ala Tyr Leu His His Asp Cys Ser Pro Arg Ile Ile His Arg Asp
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Val Lys Ser Lys Asn Ile Leu Leu Asp Lys Asp Tyr Glu Ala His Leu
725 730 735

Thr Asp Phe Gly Ile Ala Lys Ser Leu Cys Val Ser Lys Thr His Thr
740 745 750

Ser Thr Tyr Val Met Gly Thr Ile Gly Tyr Ile Asp Pro Glu Tyr Ala
755 760 765

Arg Thr Ser Arg Leu Asn Glu Lys Ser Asp Val Tyr Arg Leu Trp His
770 775 780

Cys Ser Ala Gly Ala Ala Asp Trp Gln Glu Ala Ser Gly Gln Arg Ile
785 790 795 800

Leu Ser Lys Thr Ala Ser Asn Glu Val Met Asp Thr Val Asp Pro Asp
805 810 815

Ile Gly Asp Thr Cys Lys Asp Leu Gly Glu Val Lys Lys Leu Phe Gln
820 825 830

Leu Ala Leu Leu Cys Thr Lys Arg Gln Pro Ser Asp Arg Pro Thr Met
835 840 845

His Glu Val Val Arg Val Leu Asp Cys Leu Val Asn Pro Asp Pro Pro
850 855 860

Pro Lys Pro Ser Ala His Gln Leu Pro Gln Pro Ser Pro Ala Val Pro
865 870 875 880

Ser Tyr Ile Asn Glu Tyr Val Ser Leu Arg Gly Thr Gly Ala Leu Ser

885 890 895

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Asn Leu Gly Gly Glu Ile Ser Ser Ala Leu Gly Asp Leu Met Asn Leu
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Gln Ser Ile Asp Leu Gln Gly Asn Lys Leu Gly Gly Gln Ile Pro Asp
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Glu Ile Gly Asn Cys Val Ser Leu Ala Tyr Val Asp Phe Ser Thr Asn
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Leu Leu Phe Gly Asp Ile Pro Phe Ser Ile Ser Lys Leu Lys Gln Leu
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Glu Phe Leu Asn Leu Lys Asn Asn Gln Leu Thr Gly Pro Ile Pro Ala
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Thr Leu Thr Gln Ile Pro Asn Leu Lys Thr Leu Asp Leu Ala Arg Asn
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Gln Leu Thr Gly Glu Ile Pro Arg Leu Leu Tyr Trp Asn Glu Val Leu
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Gln Tyr Leu Gly Leu Arg Gly Asn Met Leu Thr Gly Thr Leu Ser Pro
165 170 175

Asp Met Cys Gln Leu Thr Gly Leu Trp Tyr Phe Asp Val Arg Gly Asn
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Asn Leu Thr Gly Thr Ile Pro Glu Ser Ile Gly Asn Cys Thr Ser Phe
195 200 205

Glu Ile Leu Asp Val Ser Tyr Asn Gln Ile Thr Gly Val Ile Pro Tyr
210 215 220

Asn Ile Gly Phe Leu Gln Val Ala Thr Leu Ser Leu Gln Gly Asn Lys
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Leu Thr Gly Arg Ile Pro Glu Val Ile Gly Leu Met Gln Ala Leu Ala
245 250 255

Val Leu Asp Leu Ser Asp Asn Glu Leu Thr Gly Pro Ile Pro Pro Ile
260 265 270

Leu Gly Asn Leu Ser Phe Thr Gly Lys Leu Tyr Leu His Gly Asn Lys
275 280 285

Leu Thr Gly Gln Ile Pro Pro Glu Leu Gly Asn Met Ser Arg Leu Ser
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Tyr Leu Gln Leu Asn Asp Asn Glu Leu Val Gly Lys Ile Pro Pro Glu
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Leu Gly Lys Leu Glu Gln Leu Phe Glu Leu Asn Leu Ala Asn Asn Asn
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Leu Val Gly Leu Ile Pro Ser Asn Ile Ser Ser Cys Ala Ala Leu Asn
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Gln Phe Asn Val His Gly Asn Phe Leu Ser Gly Ala Val Pro Leu Glu
355 360 365

Phe Arg Asn Leu Gly Ser Leu Thr Tyr Leu Asn Leu Ser Ser Asn Ser
370 375 380

Phe Lys Gly Lys Ile Pro Ala Glu Leu Gly His Ile Ile Asn Leu Asp
385 390 395 400

Thr Leu Asp Leu Ser Gly Asn Asn Phe Ser Gly Ser Ile Pro Leu Thr
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Leu Gly Asp Leu Glu His Leu Leu Ile Leu Asn Leu Ser Arg Asn His
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Ile His Gly Lys Ile Pro Asp Gln Leu Thr Asn Cys Phe Ser Leu Ala
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Lys Asn Phe Thr Arg Phe Ser Pro Ala Ser Phe Phe Gly Asn Pro Phe
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Leu Cys Gly Asn Trp Val Gly Ser Ile Cys Gly Pro Ser Leu Pro Lys
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Ser Gln Val Phe Thr Arg Val Ala Val Ile Cys Met Val Leu Gly Phe
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Ile Thr Leu Ile Cys Met Ile Phe Ile Ala Val Tyr Lys Ser Lys Gln

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Gln Lys Pro Val Leu Lys Gly Ser Ser Lys Gln Pro Glu Gly Ser Thr
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Lys Leu Val Ile Leu His Met Asp Met Ala Ile His Thr Phe Asp Asp
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Ile Met Arg Val Thr Glu Asn Leu Asp Glu Lys Tyr Ile Ile Gly Tyr
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Ile Ala Ile Lys Arg Ile Tyr Asn Gln Tyr Pro Ser Asn Phe Arg Glu
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Phe Glu Thr Glu Leu Glu Thr Ile Gly Ser Ile Arg His Arg Asn Ile
660 665 670

Val Ser Leu His Gly Tyr Ala Leu Ser Pro Phe Gly Asn Leu Leu Phe
675 680 685

Tyr Asp Tyr Met Glu Asn Gly Ser Leu Trp Asp Leu Leu His Gly Pro
690 695 700

Gly Lys Lys Val Lys Leu Asp Trp Glu Thr Arg Leu Lys Ile Ala Val
705 710 715 720

Gly Ala Ala Gln Gly Leu Ala Tyr Leu His His Asp Cys Thr Pro Arg
725 730 735

Ile Ile His Arg Asp Ile Lys Ser Ser Asn Ile Leu Leu Asp Gly Asn
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Phe Glu Ala Arg Leu Ser Asp Phe Gly Ile Ala Lys Ser Ile Pro Ala
755 760 765

Thr Lys Thr Tyr Ala Ser Thr Tyr Val Leu Gly Thr Ile Gly Tyr Ile
770 775 780

Asp Pro Glu Tyr Ala Arg Thr Ser Arg Leu Asn Glu Lys Ser Asp Ile
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Tyr Ser Phe Gly Ile Val Leu Leu Glu Leu Leu Thr Gly Lys Lys Ala
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Val Asp Asn Glu Ala Asn Leu His Gln Met Ile Leu Ser Lys Ala Asp
820 825 830

Asp Asn Thr Val Met Glu Ala Val Asp Ala Glu Val Ser Val Thr Cys
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Met Asp Ser Gly His Ile Lys Lys Thr Phe Gln Leu Ala Leu Leu Cys
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Thr Lys Arg Asn Pro Leu Glu Arg Pro Thr Met Gln Glu Val Ser Arg
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Val Leu Leu Ser Leu Val Pro Ser Pro Pro Pro Lys Lys Leu Pro Ser
885 890 895

Pro Ala Lys Val Gln Glu Gly Glu Glu Arg Arg Glu Ser His Ser Ser
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Met Lys Glu Lys Met Gln Arg Met Val Leu Ser Leu Ala Met Val Gly
1 5 10 15

Phe Met Val Phe Gly Val Ala Ser Ala Met Asn Asn Glu Gly Lys Ala
20 25 30

Leu Met Ala Ile Lys Gly Ser Phe Ser Asn Leu Val Asn Met Leu Leu
35 40 45

Asp Trp Asp Asp Val His Asn Ser Asp Leu Cys Ser Trp Arg Gly Val
50 55 60

Phe Cys Asp Asn Val Ser Tyr Ser Val Val Ser Leu Asn Leu Ser Ser
65 70 75 80

Leu Asn Leu Gly Gly Glu Ile Ser Pro Ala Ile Gly Asp Leu Arg Asn
85 90 95

Leu Gln Ser Ile Asp Leu Gln Gly Asn Lys Leu Ala Gly Gln Ile Pro
100 105 110

Asp Glu Ile Gly Asn Cys Ala Ser Leu Val Tyr Leu Asp Leu Ser Glu
115 120 125

Asn Leu Leu Tyr Gly Asp Ile Pro Phe Ser Ile Ser Lys Leu Lys Gln
130 135 140

Leu Glu Thr Leu Asn Leu Lys Asn Asn Gln Leu Thr Gly Pro Val Pro
145 150 155 160

Ala Thr Leu Thr Gln Ile Pro Asn Leu Lys Arg Leu Asp Leu Ala Gly
165 170 175

Asn His Leu Thr Gly Glu Ile Ser Arg Leu Leu Tyr Trp Asn Glu Val
180 185 190

Leu Gln Tyr Leu Gly Leu Arg Gly Asn Met Leu Thr Gly Thr Leu Ser
195 200 205

Ser Asp Met Cys Gln Leu Thr Gly Leu Trp Tyr Phe Asp Val Arg Gly
210 215 220

Asn Asn Leu Thr Gly Thr Ile Pro Glu Ser Ile Gly Asn Cys Thr Ser
225 230 235 240

Phe Gln Ile Leu Asp Ile Ser Tyr Asn Gln Ile Thr Gly Glu Ile Pro
245 250 255

Tyr Asn Ile Gly Phe Leu Gln Val Ala Thr Leu Ser Leu Gln Gly Asn
260 265 270

Arg Leu Thr Gly Arg Ile Pro Glu Val Ile Gly Leu Met Gln Ala Leu
275 280 285

Ala Val Leu Asp Leu Ser Asp Asn Glu Leu Val Gly Pro Ile Pro Pro
290 295 300

Ile Leu Gly Asn Leu Ser Phe Thr Gly Lys Leu Tyr Leu His Gly Asn
305 310 315 320

Met Leu Thr Gly Pro Ile Pro Ser Glu Leu Gly Asn Met Ser Arg Leu
325 330 335

Ser Tyr Leu Gln Leu Asn Asp Asn Lys Leu Val Gly Thr Ile Pro Pro
340 345 350

Glu Leu Gly Lys Leu Glu Gln Leu Phe Glu Leu Asn Leu Ala Asn Asn
355 360 365

Arg Leu Val Gly Pro Ile Pro Ser Asn Ile Ser Ser Cys Ala Ala Leu
370 375 380

Asn Gln Phe Asn Val His Gly Asn Leu Leu Ser Gly Ser Ile Pro Leu
385 390 395 400

Ala Phe Arg Asn Leu Gly Ser Leu Thr Tyr Leu Asn Leu Ser Ser Asn
405 410 415

Asn Phe Lys Gly Lys Ile Pro Val Glu Leu Gly His Ile Ile Asn Leu
420 425 430

Asp Lys Leu Asp Leu Ser Gly Asn Asn Phe Ser Gly Ser Ile Pro Leu
435 440 445

Thr Leu Gly Asp Leu Glu His Leu Leu Ile Leu Asn Leu Ser Arg Asn
450 455 460

His Leu Ser Gly Gln Leu Pro Ala Glu Phe Gly Asn Leu Arg Ser Ile
465 470 475 480

Gln Met Ile Asp Val Ser Phe Asn Leu Leu Ser Gly Val Ile Pro Thr
485 490 495

Glu Leu Gly Gln Leu Gln Asn Leu Asn Ser Leu Ile Leu Asn Asn Asn
500 505 510

Lys Leu His Gly Lys Ile Pro Asp Gln Leu Thr Asn Cys Phe Thr Leu
515 520 525

Val Asn Leu Asn Val Ser Phe Asn Asn Leu Ser Gly Ile Val Pro Pro
530 535 540

Met Lys Asn Phe Ser Arg Phe Ala Pro Ala Ser Phe Val Gly Asn Pro

545 550 555 560

Tyr Leu Cys Gly Asn Trp Val Gly Ser Ile Cys Gly Pro Leu Pro Lys
565 570 575

Ser Arg Val Phe Ser Arg Gly Ala Leu Ile Cys Ile Val Leu Gly Val
580 585 590

Ile Thr Leu Leu Cys Met Ile Phe Leu Ala Val Tyr Lys Ser Met Gln
595 600 605

Gln Lys Lys Ile Leu Gln Gly Ser Ser Lys Gln Ala Glu Gly Leu Thr
610 615 620

Lys Leu Val Ile Leu His Met Asp Met Ala Ile His Thr Phe Asp Asp
625 630 635 640

Ile Met Arg Val Thr Glu Asn Leu Asn Glu Lys Phe Ile Ile Gly Tyr
645 650 655

Gly Ala Ser Ser Thr Val Tyr Lys Cys Ala Leu Lys Ser Ser Arg Pro
660 665 670

Ile Ala Ile Lys Arg Leu Tyr Asn Gln Tyr Pro His Asn Leu Arg Glu
675 680 685

Phe Glu Thr Glu Leu Glu Thr Ile Gly Ser Ile Arg His Arg Asn Ile
690 695 700

Val Ser Leu His Gly Tyr Ala Leu Ser Pro Thr Gly Asn Leu Leu Phe
705 710 715 720

Tyr Asp Tyr Met Glu Asn Gly Ser Leu Trp Asp Leu Leu His Gly Ser
725 730 735

Leu Lys Lys Val Lys Leu Asp Trp Glu Thr Arg Leu Lys Ile Ala Val
740 745 750

Gly Ala Ala Gln Gly Leu Ala Tyr Leu His His Asp Cys Thr Pro Arg
755 760 765

Ile Ile His Arg Asp Ile Lys Ser Ser Asn Ile Leu Leu Asp Glu Asn
770 775 780

Phe Glu Ala His Leu Ser Asp Phe Gly Ile Ala Lys Ser Ile Pro Ala
785 790 795 800

Ser Lys Thr His Ala Ser Thr Tyr Val Leu Gly Thr Ile Gly Tyr Ile
805 810 815

Asp Pro Glu Tyr Ala Arg Thr Ser Arg Ile Asn Glu Lys Ser Asp Ile
820 825 830

Tyr Ser Phe Gly Ile Val Leu Leu Glu Leu Leu Thr Gly Lys Lys Ala
835 840 845

Val Asp Asn Glu Ala Asn Leu His Gln Leu Ile Leu Ser Lys Ala Asp
850 855 860

Asp Asn Thr Val Met Glu Ala Val Asp Pro Glu Val Thr Val Thr Cys
865 870 875 880

Met Asp Leu Gly His Ile Arg Lys Thr Phe Gln Leu Ala Leu Leu Cys
885 890 895

Thr Lys Arg Asn Pro Leu Glu Arg Pro Thr Met Leu Glu Val Ser Arg
900 905 910

Val Leu Leu Ser Leu Val Pro Ser Leu Gln Val Ala Lys Lys Leu Pro
915 920 925

Ser Leu Asp His Ser Thr Lys Lys Leu Gln Gln Glu Asn Glu Val Arg
930 935 940

Asn Pro Asp Ala Glu Ala Ser Gln Trp Phe Val Gln Phe Arg Glu Val
945 950 955 960

Ile Ser Lys Ser Ser Ile
965

<210> 11
<211> 636
<212> DNA
<213> partial wheat ERECTA

<400> 11
atgaattctg caatacctag gcttgagggg taactcactg actggaacct tgtcacctga 60

catgtgccaa ctcactggcc tgtggtactt tgatgtgagg ggcaacaatc taacaggaac 120

aattccacag agcatagggg actgcactag ctttgagatt ctggacattt catataacaa 180

aatctctgga gaaatacctt acaacatagg tttccttcaa gtagctacac tgtcacttca 240

aggaaatagg ctgactgggg aaattccaga agtgattggc ctcatgcaag ctcttgctgt 300

tcttgatctg agcgaaaacg aactagtagg ggccattcct ccgatactcg gcaacctgtc 360

ctacactggc aaactatatt tgcatggcaa taaacttact ggtgaagtac ccccggaact 420

tgggaacatg actaaactta gctacctgca actgaatgac aatgaattag tgggcgcaat 480

tccagctgag cttgggaaac ttgaagagct attcgaatta aatcttgcca acaacaatct 540

tgagggtcct attcctacaa acatcagttc ttgcactgca ctaaacaaat tcaatgttta 600

cggcaataga ttgaacggtt ctatccctgc tggttt 636

<210> 12
<211> 466
<212> DNA
<213> partial wheat ERECTA

<400> 12
ttcaatgttt atggcaatag attgaacggt tctatccctg ctggtttcca gaatttggag 60

agtttgacta acttgaattt atcctcaaac aattttaaag gccatatccc atctgaactt 120

ggtcatatca tcaatttgga cacactggat ctttcctaca atgaactctc tggaccagtt 180

cctgctacta ttggtgatct tgagcatctt cttcaactaa atttgagcaa aaaccatctt 240

agcgggtcag tgcctgctga gttcggaaac ttgagaagca tccaagtaat tgatttatcc 300

aacaacgcca tgtctggtta tctccctgaa gaactaggcc aacttcagaa ccttgatagt 360

ttgattctta acaacaatat tttggtcgga gagatccctg ctcagttggc taactgcttc 420

agcttaaaca tcttgaactt gtcacataac aacttttctg gacatg 466

<210> 13
<211> 372
<212> DNA
<213> partial wheat ERECTA

<220>
<221> misc_feature
<222> (62)..(62)
<223> not determined

<400> 13
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gngaaaacgg ttccttgtgg gatcttctcc atggtccatc aaagaaagtg aagcttgact 120

gggacacccg actgaggatc gcggtcggcg cggcacaagg gctggcctat ctgcaccatg 180

actgcaatct gcggatagtc cacagggacg tcaagtcctc caacatcctg ctcgacgagc 240

actttgaagc gcatctctcg gacttcggca tcgccaaatg cgtcccggca gccaagaccc 300

atgcgtccac atatgtgcta ggaaccatcg gctacatcga tccagagtac gcccggacgt 360

cgaggttgaa cg 372

<210> 14
<211> 357
<212> DNA
<213> partial wheat ERECTA

<400> 14
ttgactaact tgaatttatc ctcaaacaat tttaaaggcc atatcccatc tgaacttggt 60

catatcatca atttggacac actggatctt tcctacaatg aactctctgg accagttcct 120

gctactattg gtgatcttga gcatcttctt caactaaatt tgagcaaaaa ccatcttagc 180

gggtcagtgc ctgctgagtt cggaaacttg agaagcatcc aagtaattga tttatccaac 240

aacgccatgt ctggttatct ccctgaagaa ctaggccaac ttcagaacct tgatagtttg 300

attcttaaca acaatatttt ggtcggggag atccctgctc agttggctaa ctgcttc 357

<210> 15
<211> 314
<212> DNA
<213> partial wheat ERECTA

<400> 15
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tgagcatgtt cttcagatta aatttgagca aaaaccatct tactgggcca atgcctgctg 120

agttctgaaa cttgagaagc atccaagtaa ttgatttatc caacaacgcc atgtctggtt 180

atctccctga agaactacgc caacttcaga atcttgatag tttgatgctt aacaacaata 240

ctttggttgg ggagatccct gctcatctgg ctaactgctt caacttaaac atcttgaact 300

tgccatataa caac 314

<210> 16
<211> 549
<212> DNA
<213> partial wheat ERECTA

<400> 16
catcatcggc tacggcgctt caagtaccgt gtataaatgt gtgctcaaga gtggcaaggc 60

cattgctgtg aagcggctct acagccaata caaccatggc gcccgtgagt ttgagacaga 120

gctggagaca gtcggtagca tccggcacag gaatcttgtc agccttcatg gcttctcact 180

ctctccaaat ggaaacctgc tcttctacga ttacatggaa aatggttcct tgtgggatct 240

tctccacggt ccatcaaaga aggtgaaact tgactgggac acccgactga gaatcgccgt 300

cggtgcggca caagggctgg catatcttca ccatgactgc aaccctcgga tagtccacag 360

ggacgtcaag tcctccaaca tcctgctcga cgagcacttt gaagcgcatc tctcggactt 420

cggcatcgcc aaatgcgtcc cagctgccaa gacccacgcg tccacctatg tgctaggaac 480

catcggctac atcgatccag agtacgcccg gacgtcccag ctgaacgaga aatctgatgt 540

gtacagctt 549

<210> 17
<211> 615
<212> DNA
<213> partial wheat ERECTA

<400> 17
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agttcctgct actattggtg atctggagca tcttcttcaa ctaaatttga gcaaaaacca 120

tcttagtggg tctgtgcctg ctgagttcgg aaacttgaga agcatccaag taattgattt 180

atccaacaac gccatttctg gttatctccc tgaagaacta ggccaacttc agaaccttga 240

tagtttgatt cttaacaaca atactttggt tggggagatc cctgctcagt tggctaactg 300

cttcagctta aacatcttga acttgtcata taacaacttt tctggacatg tcccattcgc 360

taagaacttc tcaaagttcc ccggggaaag cttcttggga aatccgatgc tcagcgttca 420

ctgcaaagac tccagctgtg gcaactctca tggatcaaaa gtgaatactc ggacagcgat 480

tgcttgcatc atctcgggct tcgtcatatt gctctgtgtt ctgctattgg gcaatatata 540

aaacaaagcg accacagcca cctatcaaag catctgataa accagggcaa ggacctccaa 600

agatagtact cctcc 615

<210> 18
<211> 719
<212> DNA
<213> partial wheat ERECTA

<400> 18
cgttcactgc aaagactcca gctgtggcaa ctctcatgga tcaaaagtga atattcggac 60

ggcgattgct tgcatcatct cgggcttcgt catactgcta tgtgttctgc tattggcaat 120

atataaaaca aagcgaccac agccacctat caaagcatct gataaaccag tgcaaggacc 180

tccaaagata gtactcctcc aaatggacat ggctatccat acctatgatg atattatgag 240

gctgacagag aatttgagcg agaaatacat catcggctac ggcgcttcaa gtaccgtgta 300

taaatgtgtg ctcaagagtg gcaaggccat tgctgtgaag cggctctaca gccaatacaa 360

ccatggcgcc cgtgagtttg agacagagct ggagacagtc ggtagcatcc ggcacaggaa 420

tcttgtcagc cttcatggct tctcactctc tccaaatgga aacctgctct tctacgatta 480

catggaaaat ggttccttgt gggatcttct ccacggtcca tcaaagaagg tgaaacttga 540

ctgggacacc cgactgagaa tcgccgtcgg tgcggcacaa gggctggcat atcttcacca 600

tgactgcaac cctcggatag tccacagggg cgtcaagtcc tccaacatcc tgctcgacga 660

gcactttgaa gcgcatctct cggacttcgg catcgcccaa tgcgtccccg gctgccaag 719

<210> 19
<211> 1346
<212> DNA
<213> wheat ERECTA

<400> 19
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agtttgacta acttgaattt atcctcaaac aattttaaag gccatatccc atctgaactt 120

ggtcatatca tcaatttgga cacactggat ctttcctaca atgaactctc tggaccagtt 180

cctgctacta ttggtgatct tgagcatctt cttcaactaa atttgagcaa aaaccatctt 240

agcgggtcag tgcctgctga gttcggaaac ttgagaagca tccaagtaat tgatttatcc 300

aacaacgcca tgtctggtta tctccctgaa gaactaggcc aacttcagaa ccttgatagt 360

ttgattctta acaacaatat tttggtcggg gagatccctg ctcagttggc taactgcttc 420

agcttaaaca tcttgaactt gtcacataac aacttttctg gacatgtccc attcgctaag 480

aacttctcaa agttccccgg ggaaagcttc ttgggaaatc cgatgctgag cgttcactgc 540

aaagactcca gctgtggcaa ctctcatgga tcaaaagtga atactcggac agcgattgct 600

tgcatcatct cgggcttcgt catactgcta tgtgttctgc tattggcaat atatagaaca 660

aagcgaccac agccacctat caaagcatct gataaaccag ggcaagggcc tccaaagata 720

gtactcctcc aaatggacat ggctatccat acctatgatg atattatgag gctgcacgag 780

aatttgaggg agaaatacat catcggctac gggcgcttca gtaccgtgta taaatgtgtg 840

ctcaagagtg gcaaggccat tgctgtgaag cggctctaca gccaatacaa ccatggcgcc 900

cgtgagtttg agacagagct ggagcacagtc ggtagcatcc ggcacaggaa tcttgtcagc 960

cttcatggct tctcactctc tccaaatgga aacctgctct tctacgatta catggaaaat 1020

ggttccttgt gggatcttct ccacggtcca tcaaagaagg tgaaacttga ctgggacacc 1080

cgactgagaa tcgccgtcgg tgcggcacaa gggctggcat atcttcacca tgactgcaac 1140

cctcggatag tccacagggg cgtcaagtcc tccaacatcc tgctcgacga gcactttgaa 1200

gcgcatctct cggacttcgg catcgccaaa tgcgtcccag ctgccaagac ccacgcgtcc 1260

acatatgtgc taggaaccat cggctacatc gatccagagt acgcccggac gtcccagctg 1320

aacgagaaat ctgatgtgta cagctt 1346

<210> 20
<211> 448
<212> PRT
<213> wheat ERECTA

<400> 20

Phe Asn Val Tyr Gly Asn Arg Leu Asn Gly Ser Ile Pro Ala Gly Phe
1 5 10 15

Gln Asn Leu Glu Ser Leu Thr Asn Leu Asn Leu Ser Ser Asn Asn Phe
20 25 30

Lys Gly His Ile Pro Ser Glu Leu Gly His Ile Ile Asn Leu Asp Thr
35 40 45

Leu Asp Leu Ser Tyr Asn Glu Leu Ser Gly Pro Val Pro Ala Thr Ile
50 55 60

Gly Asp Leu Glu His Leu Leu Gln Leu Asn Leu Ser Lys Asn His Leu
65 70 75 80

Ser Gly Ser Val Pro Ala Glu Phe Gly Asn Leu Arg Ser Ile Gln Val
85 90 95

Ile Asp Leu Ser Asn Asn Ala Met Ser Gly Tyr Leu Pro Glu Glu Leu
100 105 110

Gly Gln Leu Gln Asn Leu Asp Ser Leu Ile Leu Asn Asn Asn Ile Leu
115 120 125

Val Gly Glu Ile Pro Ala Gln Leu Ala Asn Cys Phe Ser Leu Asn Ile
130 135 140

Leu Asn Leu Ser His Asn Asn Phe Ser Gly His Val Pro Phe Ala Lys
145 150 155 160

Asn Phe Ser Lys Phe Pro Gly Glu Ser Phe Leu Gly Asn Pro Met Leu
165 170 175

Ser Val His Cys Lys Asp Ser Ser Cys Gly Asn Ser His Gly Ser Lys
180 185 190

Val Asn Thr Arg Thr Ala Ile Ala Cys Ile Ile Ser Gly Phe Val Ile
195 200 205

Leu Leu Cys Val Leu Leu Leu Ala Ile Tyr Lys Thr Lys Arg Pro Gln
210 215 220

Pro Pro Ile Lys Ala Ser Asp Lys Pro Gly Gln Gly Pro Pro Lys Ile
225 230 235 240

Val Leu Leu Gln Met Asp Met Ala Ile His Thr Tyr Asp Asp Ile Met
245 250 255

Arg Leu Thr Glu Asn Leu Ser Glu Lys Tyr Ile Ile Gly Tyr Gly Ala
260 265 270

Ser Ser Thr Val Tyr Lys Cys Val Leu Lys Ser Gly Lys Ala Ile Ala
275 280 285

Val Lys Arg Leu Tyr Ser Gln Tyr Asn His Gly Ala Arg Glu Phe Glu
290 295 300

Thr Glu Leu Glu Thr Val Gly Ser Ile Arg His Arg Asn Leu Val Ser
305 310 315 320

Leu His Gly Phe Ser Leu Ser Pro Asn Gly Asn Leu Leu Phe Tyr Asp
325 330 335

Tyr Met Glu Asn Gly Ser Leu Trp Asp Leu Leu His Gly Pro Ser Lys
340 345 350

Lys Val Lys Leu Asp Trp Asp Thr Arg Leu Arg Ile Ala Val Gly Ala
355 360 365

Ala Gln Gly Leu Ala Tyr Leu His His Asp Cys Asn Pro Arg Ile Val
370 375 380

His Arg Asp Val Lys Ser Ser Asn Ile Leu Leu Asp Glu His Phe Glu
385 390 395 400

Ala His Leu Ser Asp Phe Gly Ile Ala Lys Cys Val Pro Ala Ala Lys
405 410 415

Thr His Ala Ser Thr Tyr Val Leu Gly Thr Ile Gly Tyr Ile Asp Pro
420 425 430

Glu Tyr Ala Arg Thr Ser Gln Leu Asn Glu Lys Ser Asp Val Tyr Ser
435 440 445

<210> 21
<211> 1273
<212> DNA
<213> partial maize ERECTA

<400> 21
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ccgccaatct caaaggctgc cataattggt gttgctgtgg gtggacttgt tatcctcctg 120

atgatcttag tagctgtatg caggccacac catccacctg cttttaaaga tgccactgta 180

agcaagccag tgagcaatgg tccacccaag ctggtgatcc ttcatatgaa catggctctt 240

catgtctttg atgatataat gaggatgact gagaacttga gtgagaaata catcattgga 300

tacggggcat caagtacagt ttataaatgt gttctaaaga attgcaaacc agtggcaata 360

aaaaagctgt atgcccacta ccctgcagag ccttaaggaa tttgaaactg agctcgagac 420

tgttggtagc atcaaacacc ggaatctagt cagccttgcc aagggtactc gttgtcacct 480

gttgggaacc tcctcttta tgattatatg gagagtggca gcttatgggg tgttttacat 540

gaaggctcat ccaagaagaa caaacttgac tgggtgactc gcctacggat cgctcttggt 600

gcagctcaag gcctcgctta ccttcaccat gactgcagcc cacgaataat tcaccgggac 660

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ggttacattg atcccgagta cgcccgcacc tccccgcctca acgagaagtc tgatgtctac 840

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aatctccatc acttgatcct atcgaagacg gcgagcaacg aggtcatgga gacggtggac 960

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cttgactgcc tggtgaaccc ggagccgccg ccgcagccgc agcagcagca gcagaagggc 1140

gcacgcgcac caccagctgc cgcccgcagcc gtcgcccgccg gcctacgtcg acgagtacgt 1200

cagcctgcgg ggcactggcg ccctctcctg cgccaactcg tccagcacct cggacgccga 1260

gctgttcctc aag 1273

<210> 22
<211> 100
<212> DNA
<213> partial maize ERECTA

<400> 22
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acgtctacgt cttccccctac accatgttct gcgagatggc 100

<210> 23
<211> 599
<212> DNA
<213> partial maize ERECTA

<220>
<221> misc_feature
<222> (599)..(599)
<223> not determined

<400> 23
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atgacttttt acagctaaca acaccctagc tactgagtcc catgttaatc tcctgcgctg 120

cgtcccacaa aatgtcagtc aaactactcc ctgcaatcgg cctcactcaa ggcgcctcac 180

cgaacgtcta cgtcttcccc tacaccatgt tctgcgagat ggcctcgccg aacttgagga 240

acagctcggc gtccgaggtg ctggacgagt tggcgcagga gagggcgccg gtgccccgca 300

ggctgacgta ctcgtcgacg taggccggcg gcgacggctg cggcggcagc tggtggtgcg 360

cgtgcgcctt ctgctgctgc tgctgcggct gcggcggcgg ctccgggttc accaggcagt 420

caaggacgcg caccacctcg tgcatcgtcg gccggtccga gggctgccgc ttggtgcaga 480

ggagcgccag ctggaacagc ttcttcacct cgcccaggtc cttgcaggng tctcccacgt 540

cggggtccac cgtctccatg acctcgttgc tcgccgtctt cgataggatc aaggatgga 599

<210> 24
<211> 436
<212> DNA
<213> partial maize ERECTA

<400> 24
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acagataaca ccaccctagc tactgagtcc catgttaatc tcctgcgctg cgttccacaa 120

aatgtcagcc aaactactcc ctgcaatcgg cctcactcaa ggcgcctcac cgaacgtcta 180

cgtcttcccc tacaccatgt tctgcgagat ggcctcgccg aacttgagga acagctcggc 240

gtccgaggtg ctggacgagt tggcgcagga gagggcgccg gtgccccgca ggctgacgta 300

ctcgtcgacg taggccggcg gggacggctg cggcggcagc tggtggtgcg cgtgcgcctt 360

ctgctgctgc tgctgcggct gcggcggggg ctccgggttc accaggcagt caaggacgcg 420

caccacctcg ggcatc 436

<210> 25

<211> 509
<212> DNA
<213> partial maize ERECTA

<400> 25
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ttgcgtcaca tgacttttta cagctaacaa caccctagct actgagtccc atgttaatct 120

cctgcgctgc gtcccacaaa atgtcagtca aactactccc tgcaatcggc ctcactcaag 180

gcgcctcacc gaacgtctac gtcttccgct acaccatgtt ctgcgagatg gcctcgccga 240

acttgaggaa cagctcggcg tccgaggtgc tggacgagtt ggcgcaggag agggcgccgg 300

tgccccgcag gctgacgtac tcgtcgacgt aggccggcgg cgacggctgc ggcggcagct 360

ggtggtgcgc gtgcgccttc tgctgctgct gctgcggctg cggcggcggc tccgggttca 420

ccaggcagtc aaggacgcgc accacctcgt gcatcgtcgg ccggtccgag ggctgccgct 480

tggtgcagag gagcgccagc tggaacagc 509

<210> 26
<211> 318
<212> DNA
<213> partial maize ERECTA

<400> 26
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aaagaagagg aagaagctcc gctgctcttg cgtcacatga ctttttttac agctaacaac 120

accctagcta ctgagtccca tgttaatctc ctgcgctgcg tcccacaaaa tgtcagtcaa 180

actactcccc ctgcaatcgg cctcactcaa ggcgcctcac cgaacgtcta cgtcttcccc 240

tacaccatgt tctgcgagat ggcctcgccg aacttgaggg acagctcggc gtccgaggtg 300

ctggacgagt tggcgcag 318

<210> 27
<211> 103
<212> DNA
<213> partial maize ERECTA

<400> 27
agcaagccag tgagcaatgg tccacccaag ctggtgatcc ttcatatgaa catggctctt 60

catgtctttg atgatataat gaggatgact gagaacttga gtg 103

<210> 28
<211> 458
<212> DNA
<213> partial maize ERECTA

<400> 28
ataattcacc gggacgtaaa atcaaagaat atactcctcg acaaagatta tgaggcgcat 60

cttacagact tcggcatcgc taagagctta tgtgtctcga agactcacac gtcaacctac 120

gtcatgggca ctattggtac acttgatcct gagtacgccc gcacctcccg cctcaacgag 180

aagtctgatg tctacagcta cggcatcgtt ctgctggagc tgctgaccgg caagaagcca 240

gtggacaacg agtgcaatct ccatcacttg atcctatcga agacggcgag ccaacgaggt 300

catggagacg gtggaccccg acgtgggaga cacctgcaag gacctgggcg aggtgaagaa 360

gctgttccag ctggcgctcc tctgcaccaa gcggcagccc tcggaccggc cgacgatgca 420

cgaggtggtg cgcgtccttg actgcctggt gaacccgg 458

<210> 29
<211> 593
<212> DNA
<213> partial maize ERECTA

<400> 29
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catgactttt tacagctaac aacaccctag ctactgagtc ccatgttaat ctcctgcgct 120

gcgtcccaca aaatgtcagt caaactactc cctgcaatcg gcctcatttt tttgttgtcc 180

tcaccgaacg tctacgtctt cccctacacc atgttctgcg agatggcctc gccgaacttg 240

aggaacagct cggcgtccga ggtgctggac gagttggcgc aggaaagggc gccggtgccc 300

cgcaggctga cgtactcgtc gacgtaggcc ggcggcgacg gctgcggcgg cagctggtgg 360

tgcgcgtgcg ccttctgctg ctgctgctgc ggctgcggcg gcggctccgg gttcaccagg 420

cagtcaagga cgcgcaccac ctcgtgcatc gtcggccggt ccgagggctg ccgcttggtg 480

cagaggagcg ccagctggaa cagcttcttc acctcgccca ggtccttgca ggtgtctccc 540

acgtcggggt ccaccggctc catgacctcg ttgctcgccg tcttcgatag gat 593

<210> 30
<211> 206
<212> DNA
<213> partial maize ERECTA

<400> 30
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agtaagttag accacaaaga aaaatgggga ggggggataa agaagaggaa gaagctccgc 120

tgctcttgcg tcacatgact ttttttacag ctaacaacac cctagctact gagtcccatg 180

ttaatctcct gcgctgcgtc ccacaa 206

<210> 31
<211> 534
<212> DNA
<213> partial maize ERECTA

<400> 31
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caaagaaaaa tggggagggg ggataaagaa gaggaagaag ctccgctgct cttgcgtcac 120

atgacttttt ttacagctaa caacacccta gctactgagt cccatgttaa tctcctgcgc 180

tgcgtcccac aaaatgtcag tcaaactact ccccctgcaa tcggcctcac tcaaggcgcc 240

tcaccgaacg tctacgtctt cccctacacc atgttctgcg agatggcctc gccgaacttg 300

aggaacagct cggcgtccga ggtgctggac gagttggcgc aggagagggc gccggtgccc 360

cgcaggctga cgtactcgtc gacgtaggcc ggcggcgacg gctgcggcgg cagctggtgg 420

tgcgcgtgcg gcttctgctg ctgctgctgc ggctgcggcg gcggctccgg gttcaccagg 480

cagtcaagga cgcgcaccac ctcgtgcatc gtcggccggt ccgagggctg ccgc 534

<210> 32
<211> 527
<212> DNA
<213> partial maize ERECTA

<400> 32
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cctagtaagt tagaccacca aagaaaaatg gagagggggg ataaagaaga tgaggaagaa 120

gctccgctgc tcttgcgttg cgtcacatga ctttttacag ctaacaacac cctagctact 180

gagtcccatg ttaatctcct gcgctgcgtc ccacaaaatg tcagtcaaac tactccctgc 240

aatcggcctc actcaaggcg cctcaccgaa cgtctacgtc ttcccctaca ccatgttctg 300

cgagatggcc tcgccgaact tgaggaacag ctcggcgtcc gaggtgctgg acgagttggc 360

gcaggaaagg gcgccggtgc cccgcaggct gacgtactcg tcgacgtagg ccggcggcga 420

cggctgcggc ggcagctggt ggtgcgcgtg cgccttctgc tgctgctgct gcggctgcgg 480

cggcggctcc gggttcacca ggcagtcaag gacgcgcacc acctcgt 527

<210> 33
<211> 412
<212> DNA

<213> partial maize ERECTA

<400> 33

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taatctcctg cgctgcgtcc cacaaaatgt cagtcaaact actccctgca atcggcctca 120

ctcaggggcc ctcaccgaac gtctacgtct tcccctacac caggttctgc gagatggcct 180

cgccgaactt gaggaacagc tcggcgtccg aggggctgga cgagttggcg caggaaaggg 240

cgccggggcc ccgcaggctg acgtactcgt cgacgtaggc cggcggcgac ggctgcggcg 300

gcagctgggg gtgcgcgtgc gccttctgct gctgctgctg cggttgcggc ggcggctccg 360

ggttcaccag gcagtcaagg acgcgcacca cctcgggcat cgtcggccgg tc 412

<210> 34

<211> 533

<212> DNA

<213> partial maize ERECTA

<400> 34

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caccaaagaa aaatggagag gggggataaa gaagatgagg aagaagctcc gctgctcttg 120

cgttgcgtca catgactttt tacagctaac aacaccctag ctactgagtc ccatgttaat 180

ctcctgcgct gcgtcccaca aaatgtcagt caaactactc cctgcaatcg gcctcactca 240

aggcgcctca ccgaacgtct acgtcttccc ctacaccatg ttctgcgaga tggcctcgcc 300

gaacttgagg aacagctcgg cgtccgaggt gctggacgag ttggcgcagg agagggcgcc 360

ggtgccccgc aggctgacgt actcgtcgac gtaggccggc ggcgacggct gcggcggcag 420

ctggtggtgc gcgtgcgcct tctgctgctg ctgctgcggc tgcggcggcg gctccgggtt 480

caccaggcag tcaaggacgc gcaccacctc gtgcatcgtc ggccggtccg agg 533

<210> 35
<211> 191
<212> DNA
<213> partial maize ERECTA

<400> 35
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aagaagctcc gctgctcttg cgttgcgtca catgactttt tacagctaaa caacacccta 120

gctactgagt cccatggtaa tctcctgcgc tgcgtcccac aaaatgtcag tcaaactact 180

ccctgcaatc g 191

<210> 36
<211> 683
<212> DNA
<213> partial maize ERECTA

<400> 36
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atgaaggctc atccaagaag aacaaacttg actgggtgac tcgcctacgg atcgctcttg 120

gtgcagctca aggcctcgct taccttcacc atgactgcag cccacgaata attcaccggg 180

acgtaaaatc aaagaatata ctcctcgaca aagattatga ggcgcatctt acagacttcg 240

gcatcgctaa gagcttatgt gtctcgaaga ctcacacgtc aacctacgtc atggcactta 300

ttggttacat tgatcctgag tacgcccgca cctcccgcct caacgagaag tctgatgtct 360

acagctacgg catcgttctg ctggagctgc tgaccggcaa gaagccagtg gacaacgagt 420

gcaatctcca tcacttgatc ctatcgaaga cggcgagcaa cgaggtcatg gaggacggtg 480

accccgacgt gggagacacc tgcaaggacc tgggccgaggt gaagaagctg ttccagctgg 540

cgctcctctg caccaagcgg cagccctcgg accggcccgac gatgcacgag gtggtgcgcg 600

tccttgactg cctggtgaac ccggagccgc cgcccgagcc gcagcagcag cagcagaagg 660

cgcacgcgca ccaccagctg ccg 683

<210> 37
<211> 610
<212> DNA
<213> partial maize ERECTA

<400> 37
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cactattggt tacattgatc ctgagtacgc ccgcacctcc cgcctcaacg agaagtctga 120

tgtctacagc tacggcatcg ttctgctgga gctgctgacc ggcaagaagc cagtggacaa 180

cgagtgcaat ctccatcact tgatcctatc gaagacggcg agcaacgagg tcatggagac 240

ggtggacccc gacgtgggag acacctgcaa ggacctgggc gaggtgaaga agctgttcca 300

gctggcgctc ctctgcacca agcggcagcc ctcggaccgg ccgacgatgc acgaggtggt 360

gcgcgtcctt gactgcctgg tgaacccgga gccgccgccg cagccgcagc agcagcagca 420

gaaggcgcac gcgcaccacc agctgccgcc gcagccgtcg ccgccggcct acgtcgacga 480

gtacgtcagc ctgcggggca ccggcgccct ctcctgcgcc aactcgtcca gcacctcgga 540

cgccgagctg ttcctcaagt tcggcgaggc catctcgcag aacatggtgt aggggaagac 600

gtagacgttc 610

<210> 38
<211> 208
<212> DNA
<213> partial maize ERECTA

<220>
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<222> (138)..(138)
<223> not determined

<400> 38
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cggggcatca agtactgntt ataaatgtgt tctaaagaat tgcaaaccag tggcaataaa 180

aaagctgtat gcccactacc ctcagagc 208

<210> 39
<211> 634
<212> DNA
<213> partial maize ERECTA

<400> 39
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gacttcggca tcgctaagag cttatgtgtc tcgaagactc acacgtcaac ctacgtcatg 120

ggcactattg gttacattga tcctgagtac gcccgcacct cccgcctcaa cgagaagtct 180

gatgtctaca gctacggcat cgttctgctg gagctgctga ccggcaagaa gccagtggac 240

aacgagtgca atctccatca cttgatccta tcgaagacgg cgagcaacga cgtcatggag 300

acggtggacc ccgacgtggg agacacctgc aaggacctgc gcgaggtgaa gaagctgttc 360

cagctggcgc tcctctgcac caagcggcag ccctcggacc ggccgacgat gcacgaggtg 420

gtgcgcgtcc ttgactgcct ggtgaacccg gagccgccgc cgcagccgca gcagcagcag 480

cagaaggcgc acgcgcacca ccagctgccg ccgcagccgt cgccgccggc ctacgtcgac 540

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gacgccgagc tgttcctcaa gttcggcgag gcca 634

<210> 40
<211> 558
<212> DNA
<213> partial maize ERECTA

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atcatcaaag acatgaagag ccatgttcat atgaaggatc accagcttgg gtggaccatt 120

gctcactggc ttgcttacag tggcatcttt aaaagcaggt ggatggtgtg gcctgcatac 180

agctactaag atcatcagga ggataacaag tccacccaca gcaacaccaa ttatggcagc 240

ctttgagatt ggcggtttgt ctcggtggcc agtggaacga catgaagaac caagccaata 300

tccacagagt ccaggattac ctaaaaagct gtcatgtgaa aaccgtgtga agttgttgtc 360

agtagggaca gcaccagcca aattattgta tgacacattt aagatattga ggctgaagca 420

gttcatcaga gaagagacat cgccagttat attgttgttt tccagtttta gcaacatcag 480

gttttgcagc attccaagtt cttgaggaat cagaccacca agatgattat aggataaatc 540

aatctccatg acacttct 558

<210> 41
<211> 429
<212> DNA
<213> partial maize ERECTA

<400> 41
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tgctcactgg cttgcttaca gtggcatctt taaaagcagg tggatggtgt ggcctgcata 180

cagctactaa gatcatcagg aggataacaa gtccacccac agcaacacca attatggcag 240

cctttgagat tggcggtttg tctcggtggc cagtggaacg acatgaagaa ccaagccaat 300

atccacagag tccaggatta cctaaaaagc tgtcatgtga aaaccgtgtg aagttgttgt 360

cagtagggac agcaccagcc aaattattgt atgacacatt taagatattg aggctgaagc 420

agttcatca 429

<210> 42
<211> 556
<212> DNA
<213> partial maize ERECTA

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ggctaacagg cttgtttgac ctgaaccttg cgaataacca ccttgaagga ccaattcctg 180

acaacctaag ttcatgtgtg aatctcaata gcttcaatgc ttatggcaac aagttaaatg 240

gaaccattcc tcgttcgctg cggaaacttg aaagcatgac ctatttaaat ctttcatcaa 300

atttcataag tggctctatt cctattgagc tatcaaggat caacaatttg gacacgttgg 360

acttatcctg taacatgatg acgggtccaa ttccatcatc cattggcaac ctagagcatc 420

tattgaggct taacttgagc aagaatgatc tagttggatt catccctgcg gagtttggta 480

atttgagaag tgtcatggag attgatttat cctataatca tcttggtggt ctgattcctc 540

aagaacttgg aatgct 556

<210> 43
<211> 683
<212> DNA
<213> partial maize ERECTA

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gcatcgctaa gagcttatgt gtctcgaaga ctcacacgtc aacctacgtc atgggcacta 300

ttggttacat tgatcctgag tacgcccgca cctcccgcct caacgagaag tctgatgtct 360

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cgcacgcgca ccaccagctg ccg 683

<210> 44
<211> 2315
<212> DNA
<213> maize ERECTA

<400> 44
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aagaacttgg aatgctgcaa aacctgatgt tgctaaaact ggaaaacaac aatataactg 600

gcgatgtctc ttctctgatg aactgcttca gcctcaatat cttaaatgtg tcatacaata 660

atttggctgg tgctgtccct actgacaaca acttcacacg gttttcacat gacagctttt 720

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aggcgcacgc gcaccaccag ctgccgccgc agccgtcgcc gccggcctac gtcgacgagt 1920

acgtcagcct gcggggcacc ggcgccctct cctgcgccaa ctcgtccagc acctcggacg 1980

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ctctccattt ttctttggtg gtctaactta ctaggaggct gtattgatcc atcatcatct 2280

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<210> 45
<211> 675
<212> PRT
<213> maize ERECTA

<400> 45

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Met Ser Thr Leu His Tyr Leu Glu Leu Asn Asp Asn Gln Leu Thr Gly
20 25 30

Ser Ile Pro Pro Glu Leu Gly Arg Leu Thr Gly Leu Phe Asp Leu Asn
35 40 45

Leu Ala Asn Asn His Leu Glu Gly Pro Ile Pro Asp Asn Leu Ser Ser
50 55 60

Cys Val Asn Leu Asn Ser Phe Asn Ala Tyr Gly Asn Lys Leu Asn Gly
65 70 75 80

Thr Ile Pro Arg Ser Leu Arg Lys Leu Glu Ser Met Thr Tyr Leu Asn
85 90 95

Leu Ser Ser Asn Phe Ile Ser Gly Ser Ile Pro Ile Glu Leu Ser Arg
100 105 110

Ile Asn Asn Leu Asp Thr Leu Asp Leu Ser Cys Asn Met Met Thr Gly
115 120 125

Pro Ile Pro Ser Ser Ile Gly Asn Leu Glu His Leu Leu Arg Leu Asn
130 135 140

Leu Ser Lys Asn Asp Leu Val Gly Phe Ile Pro Ala Glu Phe Gly Asn
145 150 155 160

Leu Arg Ser Val Met Glu Ile Asp Leu Ser Tyr Asn His Leu Gly Gly
165 170 175

Leu Ile Pro Gln Glu Leu Gly Met Leu Gln Asn Leu Met Leu Leu Lys
180 185 190

Leu Glu Asn Asn Asn Ile Thr Gly Asp Val Ser Ser Leu Met Asn Cys
195 200 205

Phe Ser Leu Asn Ile Leu Asn Val Ser Tyr Asn Asn Leu Ala Gly Ala
210 215 220

Val Pro Thr Asp Asn Asn Phe Thr Arg Phe Ser His Asp Ser Phe Leu
225 230 235 240

Gly Asn Pro Gly Leu Cys Gly Tyr Trp Leu Gly Ser Ser Cys Arg Ser
245 250 255

Thr Gly His Arg Asp Lys Pro Pro Ile Ser Lys Ala Ala Ile Ile Gly
260 265 270

Val Ala Val Gly Gly Leu Val Ile Leu Leu Met Ile Leu Val Ala Val
275 280 285

Cys Arg Pro His His Pro Pro Ala Phe Lys Asp Ala Thr Val Ser Lys
290 295 300

Pro Val Ser Asn Gly Pro Pro Lys Leu Val Ile Leu His Met Asn Met
305 310 315 320

Ala Leu His Val Phe Asp Asp Ile Met Arg Met Thr Glu Asn Leu Ser
325 330 335

Glu Lys Tyr Ile Ile Gly Tyr Gly Ala Ser Ser Thr Val Tyr Lys Cys
340 345 350

Val Leu Lys Asn Cys Lys Pro Val Ala Ile Lys Lys Leu Tyr Ala His
355 360 365

Tyr Leu Gln Ser Leu Lys Glu Phe Glu Thr Glu Leu Glu Thr Val Gly
370 375 380

Ser Ile Lys His Arg Asn Leu Val Ser Leu Gln Gly Tyr Ser Leu Ser
385 390 395 400

Pro Val Gly Asn Leu Leu Phe Tyr Ala Tyr Met Glu Ser Gly Ser Leu
405 410 415

Trp Asp Val Leu His Glu Gly Ser Ser Lys Lys Asn Lys Leu Asp Trp

420 425 430

Val Thr Arg Leu Arg Ile Ala Leu Gly Ala Ala Gln Gly Leu Ala Tyr
435 440 445

Leu His His Asp Cys Ser Pro Arg Ile Ile His Arg Asp Val Lys Ser
450 455 460

Lys Asn Ile Leu Leu Asp Lys Asp Tyr Glu Ala His Leu Thr Asp Phe
465 470 475 480

Gly Ile Ala Lys Ser Leu Cys Val Ser Lys Thr His Thr Ser Thr Tyr
485 490 495

Val Met Gly Thr Ile Gly Tyr Ile Asp Pro Glu Tyr Ala Arg Thr Ser
500 505 510

Arg Leu Asn Glu Lys Ser Asp Val Tyr Ser Tyr Gly Ile Val Leu Leu
515 520 525

Glu Leu Leu Thr Gly Lys Lys Pro Val Asp Asn Glu Cys Asn Leu His
530 535 540

His Leu Ile Leu Ser Lys Thr Ala Ser Asn Glu Val Met Glu Thr Val
545 550 555 560

Asp Pro Asp Val Gly Asp Thr Cys Lys Asp Leu Gly Glu Val Lys Lys
565 570 575

Leu Phe Gln Leu Ala Leu Leu Cys Thr Lys Arg Gln Pro Ser Asp Arg
580 585 590

Pro Thr Met His Glu Val Val Arg Val Leu Asp Cys Leu Val Asn Pro
595 600 605

Glu Pro Pro Pro Gln Pro Gln Gln Gln Gln Gln Lys Ala His Ala His
610 615 620

His Gln Leu Pro Pro Gln Pro Ser Pro Pro Ala Tyr Val Asp Glu Tyr
625 630 635 640

Val Ser Leu Arg Gly Thr Gly Ala Leu Ser Cys Ala Asn Ser Ser Ser
645 650 655

Thr Ser Asp Ala Glu Leu Phe Leu Lys Phe Gly Glu Ala Ile Ser Gln
660 665 670

Asn Met Val
675